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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/516,621	12/03/2004	Tatsuo Tsuneka	SAE-036	5295
20374	7590	12/21/2005	EXAMINER	
KUBOVCIK & KUBOVCIK SUITE 710 900 17TH STREET NW WASHINGTON, DC 20006			CHEUNG, WILLIAM K	
			ART UNIT	PAPER NUMBER
			1713	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/516,621

Applicant(s)

TSUNEKA ET AL.

Examiner

William K. Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. In view of amendment filed December 9, 2005, the rejection of claims 1-5 under 35 U.S.C. 102(e) as being anticipated by Ashihara et al. (US Patent 6,277,912) is withdrawn.

#### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

#### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 1-5 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ashihara et al. (US Patent 6,277,912).

*The invention of claims 1-5 relates to an **aqueous resin dispersion** composition prepared **without the use of an emulsifier** by dissolving in **an ethereal solvent** an **acid-modified chlorinated polyolefin** that has been **modified by at least one member** selected from the group consisting: of **maleic acid, itaconic acid, citraconic acid, and acid anhydrides** thereof; adding a basic substance to the acid-modified chlorinated polyolefin to neutralize; adding a dispersion medium consisting of water to disperse the neutralized acid-modified chlorinated polyolefin therein and removing the ethereal solvent.*

The prior art to Ashihara et al. provides an aqueous, chlorinated modified polyolefin-based resin composition and its manufacture. The aqueous chlorinated polyolefin is modified by  $\alpha$ ,  $\beta$ -unsaturated carboxylic acid and/or its acid anhydrides, for

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example, maleic acid, maleic anhydride, citraconic acid, citraconic anhydride, itaconic acid, and itaconic anhydride (column 7, line 66, to column 8, line 2) and neutralized with an organic or inorganic basic substance (column 5, lines 9-11). Ashihara et al. (col. 15-16, Table 1, Example No. 6) clearly indicate that the scope of invention of Ashihara et al. encompasses dispersions without using a surfactant.

In regard to claim 2, the emulsion of the aqueous, chlorinated modified polyolefin-based resin composition containing isotactic polypropylene as a main component is shown at column 7, lines 4-7. The  $\alpha$ ,  $\beta$ -unsaturated carboxylic acid modifier is used in an amount of 0.01-60 wt% (column 6, lines 16-17).

In regard to claims 3-4, chlorination of the chlorinated modified polyolefin is in the range, preferably, of 10-40 wt% (column 8, line 50-56), which covers the instantly claimed range of 15-35 wt%. The weight-average molecular weight of the modified chlorinated polyolefin polymer, i.e. 1,000-3,000,000, is described at column 7, lines 14-15, , which covers the instantly claimed range of 10,000-150,000.

As to claim 5, the basic substances used for neutralization of the modified chlorinated polyolefin are disclosed at column 10, lines 44+, wherein the amine compounds can be seen.

Although the process of Ashihara et al. requires the use of an emulsifier while applicants claims do not, applicants must recognize that "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its

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method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” In re Thorpe, 777F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

5. Claims 6-11 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Ashihara et al. (US Patent 6,277,912).

*The invention of claims 6-11 relates to a **process for producing an aqueous resin dispersion** composition **without the use of an emulsifier** comprising the steps of, in order:*

***dissolving an acid-modified chlorinated polyolefin in an ethereal solvent;***  
***adding a basic substance to the acid-modified chlorinated polyolefin to neutralize;***  
***adding a dispersion medium consisting of water therein to disperse the neutralized acid-modified chlorinated polyolefin therein; and***  
***removing the ethereal solvent.***

The prior art to Ashihara et al. is adequately presented above in this Office Action and is incorporated herein by reference. Ashihara et als' disclosure at column 13, Example 1, teaches the procedure of preparing the modified chlorinated polyolefin

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which includes dissolving the modified chlorinated polyolefin in an organic solvent (column 13, line 30), adding water for dispersion (column 13, line 45), neutralizing the pre-emulsion (column 13, line 57), and evaporating the solvent (column 13, line 59-60). Ashihara et al. (col. 15-16, Table 1, Example No. 6) clearly indicate that the scope of invention of Ashihara et al. encompasses dispersions without using a surfactant.

The difference between the method of preparing the aqueous rein dispersion composition disclosed by Ashihara et al. and that claimed by the applicant is that the process step sequences are different, i.e. Ashihara et al. neutralize the dispersion after water is added.

However, since applicant has not demonstrated the criticality of the process sequence, the selection of any order of performing process step is *prima facie* obvious in the absence of new or unexpected results. *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946). See MPEP §§ 2144.04.

Another difference between the prior art and the present application is that the organic solvent used by Ashihara et al. is an aromatic solvent, not the ethereal solvent as required by the present application.

The prior art to Verardi et al. discloses a liquid coating composition comprising chlorinated polyolefin which is grafted with maleic acid or anhydride (Abstract and

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column 3, line 53-54) having a weight-average molecular weight of 5,000-200,000 (column 3, lines 3-4). The chlorine content of the chlorinated polyolefin is preferably 10-30 wt% (column 3, lines 63-64). The polyolefin is neutralized with an amine (column 4, lines 3-4). The coating composition can be either water-based or solvent-based. Examples of the solvent include aromatic solvents, such as toluene, xylene; and ethereal solvents, such as propylene glycol monomethyl ether (column 6, lines 41-54). Verardi et al. herein teach the interchangeability of aromatic solvent, such as toluene, and ethereal solvent, such as propylene glycol monomethyl ether, as functionally equivalent organic solvent in a substantially identical aqueous, modified chlorinated polyolefin-based resin dispersion composition. Thus, it would have been obvious to one of ordinary skill in the art to replace xylene with ethereal solvent, as taught by Verardi et al. in Ashihara et als' aqueous chlorinated modified polyolefin-based resin composition based on their expected interchangeability as functionally equivalent organic solvent, motivated by a reasonable expectation of success. *In re O'Farrell*, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988).

As to claim 7, the rejection made for claim 2 described previously in this Office Action would be applied herein to reject claim 7.

As to claims 8-9, the rejection made for claims 3-4 described previously in this Office Action would be applied herein to reject claims 8-9.



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As to claim 10, Verardi et als' teaching of the ethereal solvents, such as propylene glycol monomethyl ether, can be seen at column 6, lines 53-54.

As to claim 11, the rejection made for claim 5 described previously in this Office Action would be applied herein to reject claim 11.

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



William K. Cheung, Ph. D.

Primary Examiner

December 16, 2005

**WILLIAM K. CHEUNG  
PRIMARY EXAMINER**